



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chair
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

January 21, 2016

Acting Assistant Administrator Janet McCabe
United States Environmental Protection Agency
Office of Air and Radiation
William Jefferson Clinton Building
1200 Pennsylvania Ave NW, Washington, DC, 20460
[Submitted via regulations.gov]

RE: Docket Number EPA-HQ-OAR-2015-0199 (Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulation)

Dear Assistant Administrator McCabe:

The California Air Resources Board (ARB or California) is pleased to submit comments on the United States Environmental Protection Agency's (U.S. EPA) Federal Plan Requirements for Greenhouse Gas Emissions from Electric Utility Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulation Proposed Rule (Federal Trading Plan) published at 80 Fed. Reg. 64966 et seq. and released under U.S. EPA Docket ID No. EPA-HQ-OAR-2015-0199.

U.S. EPA has requested specific comments on multiple aspects of the proposed Federal Trading Plan (including the Model Trading Rules). As an initial matter, ARB notes that, consistent with California's previous comments on the Clean Power Plan, ARB is assessing the use of a state-measures approach to ensure compliance with the Clean Power Plan. California's Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (Cap-and-Trade Regulation or Program; tit. 17, California Code of Regulations, §§ 95801-96022) may serve as the principal program for this state-measures approach.

Although ARB is unlikely to seek to utilize the Federal Trading Plan (or Model Trading Rules) as part of our state-measures approach, we understand that U.S. EPA is likely to view the final Federal Trading Plan as presumptively approvable if used as a state plan. ARB appreciates U.S. EPA's efforts to support market-based programs, and is pleased

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

to share its experience on how these programs can be successful, and offer comments to improve the presumptively-approvable Federal Trading Plan.

Accordingly, ARB is submitting these comments based on California's experience implementing an economy-wide carbon trading program through the Cap-and-Trade Program. ARB's Cap-and-Trade Program was developed through a multi-year stakeholder process in which many of the same types of questions and requested areas of comment posed by U.S. EPA regarding the Federal Trading Plan were raised and addressed. ARB's specific, detailed assessment and responses to comments can be found within our rulemaking documents located here: <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>.¹

The remainder of this letter is, for the most part, organized in the same order in which U.S. EPA request comments in the Federal Trading Plan. Although these comments will not address every area called out by U.S. EPA in the Federal Trading Plan, they are submitted in the spirit of providing U.S. EPA with real-world examples of considerations and design elements necessary for implementing a successful market-based program to reduce greenhouse gas (GHG) emissions.

1. Mass Based vs. Rate Based – p. 64969²

In the proposed Federal Trading Plan, U.S. EPA has proposed two different approaches—mass-based or rate-based. U.S. EPA has indicated its preference for proceeding with a mass-based approach, but has requested comment on which approach is preferred by states and other interested parties for the federal plan. Based on California's experience with mass-based trading through the Cap-and-Trade Program, which was developed in collaboration with the Western Climate Initiative to facilitate linkage with other mass-based trading programs, ARB strongly recommends that U.S. EPA pursue mass-based trading for the Model Trading Rules.

To that end, ARB's comments focus specifically on elements of the Federal Trading Plan that relate to mass-based trading. ARB recommends against pursuing a rate-based Federal Trading Plan and is not providing comments on the sections of the Federal Trading Plan that are specific to rate-based trading.

¹ Most of the initial questions raised during the development of California's Cap-and-Trade Program related to market design, allocation, market monitoring, and trading requirements were part of the initial 2010-2011 rulemaking process, and can be found in a document entitled the Final Statement of Reasons for that rulemaking, which is available here: <http://www.arb.ca.gov/regact/2010/capandtrade10/fsor.pdf>.

² Unless otherwise indicated, all references throughout this comment letter to Federal Register citations are to 80 Fed. Reg. 64966 et seq. (Oct. 23, 2015), available at <https://www.gpo.gov/fdsys/pkg/FR-2015-10-23/pdf/2015-22848.pdf>.

California's mass-based program ensures the greenhouse gas reduction mass emissions targets outlined in AB 32, the Global Warming Solutions Act of 2006, are met. Establishing a firm, declining mass-based cap on greenhouse gas emissions works in concert with California's suite of programs to achieve 1990 greenhouse gas emission levels by 2020, and places a finite limit on the amount of emissions that can occur over a specific time period.

ARB believes that using a single metric for state plans addressing electricity generating unit (EGU) emission controls would best support efforts to develop regional trading systems over time, as well as making it easier to address potential "seams" between different state plans. Although each state will select the plan and regional relationships that best fit its circumstances, U.S. EPA can usefully steer towards uniformity by picking a single metric for the federal plan. ARB believes mass is the superior metric for that purpose because of its transparency, and the relative ease of comparing different mass-based targets and systems. Similarly, ARB recommends that U.S. EPA only employ a mass-based approach to avoid market segmentation due to division of states into rate-based and mass-based trading systems.

California's Cap-and-Trade Program is currently linked with the Cap-and-Trade System of Québec, and other subnational jurisdictions have expressed interest in linkage to this program as well. From our experience, linkage provides real and substantive benefits to trading programs, which can include increased market liquidity, reduced compliance costs, and reduced emissions leakage. Additional linkages could occur with mass-based trading programs under the Clean Power Plan, benefiting California and other linked states.

2. Staged approach to finalizing one or more Model Trading Rules and finalizing Federal Trading Plans – pp. 64974-64975

U.S. EPA requests comment on the proposed staged approach to finalizing Model Trading Rules and the Federal Trading Plans. ARB recommends that U.S. EPA utilize a staged approach by first finalizing the Model Trading Rules, followed by finalization of the Federal Trading Plan if, and only if, it becomes necessary for any state. ARB believes a phased approach will provide increased transparency and certainty to states opting to develop plans based on the Model Trading Rules, as well as to regulated entities and other interested stakeholders.

ARB recognizes that it may be appropriate to swiftly finalize a Federal Trading Plan for states that clearly opt out of state planning. If U.S. EPA does so, however, it will still be important for U.S. EPA to provide clear notice to regulated entities about what the rules

and approved plans will be in order to prevent grid disruption and provide market certainty.

ARB also notes that U.S. EPA should consider how best to finalize state plans with appropriate, and accurate, mass targets. Because mass targets calculations depend on the final list of affected EGUs in each state, they may vary if that list changes. In the final Clean Power Plan, U.S. EPA provided a mechanism for states to adjust affected EGU lists and the attendant mass targets. U.S. EPA should consider whether and how to incorporate a similar mechanism into any Federal Trading Plan approval process.

3. Federal Trading Plan as backstop – p. 64975

U.S. EPA has proposed the option of allowing the Federal Trading Plan to be used as a federally enforceable backstop for states implementing a state measures plan. Although ARB is not indicating through this comment any intention, one way or the other, of exercising this option, ARB does support U.S. EPA's approach to allow a final federal mass-based trading rule to be an option for states to utilize as the federal backstop should a state wish to do so. ARB understands that when operating as the backstop, the mass-based model trading rule must account for emissions shortfalls and be federally enforceable. Based on California's experience with the Cap-and-Trade Program, such a mass-based trading program is effective. In California, such an approach provides certainty that the 2020 AB 32 emissions target will be achieved in California by placing a finite limit on the amount of emissions that can occur over that time period and working in concert with all of California's other climate programs.

4. Mass based only use allowances, rate-based only trade Emission Reduction Credits (ERCs) – p. 64976

As mentioned previously, ARB supports U.S. EPA moving forward with a mass-based only federal trading rule. If U.S. EPA were to finalize a rule allowing for both mass-based trading and rate-based trading, ARB supports the proposed use of allowances for compliance under a mass-based trading Federal Trading Plan and separately of ERCs for compliance under a rate-based plan. Consistency and fungibility of compliance instruments across trading partners will facilitate linkage and ensure the integrity of emission goals across states; whereas allowing trading between mass-based and rate-based systems would not ensure such consistency, fungibility, or integrity.

5. Expanding the scope of interstate trading to include linking states covered by the mass-based Federal Trading Plan with any state that as an approved mass-based trading state plan meeting proposed conditions for linkages – p. 64977

U.S. EPA requests comment on expanding the scope of interstate trading to including linking states covered by the mass-based Federal Trading Plan with any state that has an approved mass-based trading state plan meeting proposed linkage conditions, including use of an U.S. EPA-designated tracking system. As mentioned previously, ARB does not recommend that U.S. EPA proceed with a rate-based federal trading plan. In the context of a mass-based federal trading plan, ARB supports linkage of programs with fungible compliance instruments provided that linkage requirements (both state and federal) are met. Allowing for mass-based trading between federal-plan states is a good strategy for seeking out opportunities to achieve carbon reductions at low cost.

States operating under a state measures mass-based plan with trading should have full discretion to link, or not, with the Federal Trading Plan. Some states have plans that may have greater stringency than the federal mass-based program for a particular state. Requiring linkage to the federal trading program, rather than allowing these states to consider whether linkage is appropriate, would have the unintended consequence of reducing the integrity of the state programs.

ARB supports the use of U.S. EPA-approved tracking systems for trading programs that will seek to link to a mass-based federal trading plan. California utilizes the Compliance Instrument Tracking System Service (CITSS), which currently supports California's Cap-and-Trade Program and the existing linkage with Québec's Cap-and-Trade System, and could support linkage to other programs going forward. Provided that state programs meet linkage conditions, ARB strongly supports the option of linkage of state programs with the Federal Trading Plan and interstate trading in both directions between states implementing the Federal Trading Plan as well as states implementing mass-based state measures.

6. Allowances in metric or short tons – p. 64977

U.S. EPA requests comment on the extension of linkage to state plans that issue allowances in metric tons, as opposed to short tons. ARB strongly supports extending linkage to state plans where allowances are measured in metric tons. Where allowances are traded across plans with short or metric tons, ARB suggests U.S. EPA require the use of existing conversion factors for the translation of metric tons to short tons for clarity and consistency across plans. The allowance conversion factor should be included in the U.S. EPA sanctioned tracking system to ensure accuracy and require

trading partners to acknowledge the conversion prior to the finalization of any trade. Allowances in the California Cap-and-Trade Program are measured in metric tons and allowing for trading in metric tons would allow the California state plan to better contemplate linkage with other states that may utilize short tons, broadening the potential benefits of linkage under the Federal Trading Plan.

7. Linking of state plans that include non-affected emission sources – p. 65977

U.S. EPA requests comment on expanding the scope of interstate trading to states plans that include non-affected emission sources. ARB strongly supports U.S. EPA options allowing the expansion of trading to state plans that include non-affected emission sources which ARB understands to be those sources not covered by the Clean Power Plan. U.S. EPA should understand that states already operating greenhouse gas trading systems may be required by existing statute to review these state plans before linkage is possible. ARB agrees with the U.S. EPA assessment that broad trading regions provide greater opportunities for cost-effective implementation of reductions and promulgate emission reductions across economic sectors. The California Cap-and-Trade Program covers 85 percent of California's GHG emissions, including EGUs regulated under the Clean Power Plan. The wide scope of the Cap-and-Trade Program facilitates low-cost emission reductions throughout the economy and provides a transparent price signal across sectors in California, as well as in our linked partner, Québec. The requirement of a backstop with any submitted state plan ensures that reductions will occur across affected EGUs and can provide certainty that state plans covering multiple sectors will achieve the goals of the Clean Power Plan. Allowing multi-sector trading may also increase the scope of GHG reductions beyond affected EGUs, resulting in deeper decarbonization across the United States.

8. General comments on interstate trading linkages in the Federal Trading Plans – p. 64977

U.S. EPA requests comment on the proposed approach to interstate trading linkages in the Federal Trading Plan. ARB strongly supports including the option for interstate trading linkages for states who want to link with the Federal Trading Plan and whose programs meet established U.S. EPA-designated criteria. In California, Government Code sections 12894(e)-(f) (adopted through Senate Bill 1018; Chapter 39, Statutes of 2012) (SB 1018) require the Governor to make four findings in order to link the California Cap-and-Trade Program with a GHG trading system of another jurisdiction. Under SB 1018, the linking trading program must have program requirements at least as stringent as the California program, the linkage must not limit California's ability to enforce AB 32, the linking jurisdiction must have the ability to pursue enforcement equivalent to California, and the linkage must not impose any significant liability on

California. Any trading linkage pursued by California under the Clean Power Plan would be subjected to the findings of SB 1018. California supports similar stringent linking criteria for interstate trading linkages which can include additional findings related to allowance conversion, varying allocation schemes across programs, and use of interoperable tracking systems.

9. Expectation of a competitive ERC or allowances market and potential design choices to address any identified market power concern – p. 64977

U.S. EPA requests comment on proposed interstate trading and the competitiveness of the ERC and allowance market. While linking interstate trading programs can increase market liquidity and potentially prevent market manipulation, ARB believes that care must be exercised to ensure the economic impact of linkage is understood and measured—specifically in regards to the effect of allowance allocation on distributional outcomes and leakage. A transparent and well-functioning market is a critical component to a trading program and can promote competitiveness. The scope, allowance allocation schemes, holding and position limits, and regulatory certainty of the trading program can all impact competitiveness. ARB strongly encourages U.S. EPA-designated market design features that will ensure state plans and the Federal Trading Plan are free of untoward manipulation. As markets are developed and subsequently linked, ARB supports robust analysis of the potential for market manipulation and supports development of market controls (such as output-based, updating allowance allocation and stringent purchase and holding limits, especially if an auction mechanism is included as a form of allowance allocation) to ensure competitiveness. This is of critical importance in the analysis of the impact of proposed linkages between markets where the exercise of market power may be a concern.

While ARB expects that a federal mass-based trading system would be competitive, this will in part depend on the different programs and plans implemented by each state or group of states. With respect to the Federal Trading Plan, one reason ARB has recommended that U.S. EPA only employ a mass-based approach is to avoid market segmentation due to division of states into rate-based and mass-based trading systems.

Other areas that could impact competitiveness include state rules regarding state-to-state linkage, tracking system incompatibility, conflicting environmental goals, or other market design or organization issues.

If trading systems are created at the subnational level, U.S. EPA must assess the structure of each market separately to ensure competitiveness. Corporate associations between corporations who own or operate EGUs (as well as emission sources in other sectors) will have a larger impact for sub-regional markets because many generation

corporations have a regional focus. U.S. EPA must be able to assess the market structure and not just look at overall supply and demand in each market to ensure market power is not a concern. The Federal Energy Regulatory Commission (FERC) faced such an issue when it became aware of the shortcomings of the “hub and spoke” model for assessing market power in deregulated electricity markets. FERC replaced this model with two “indicative” market power tests that incorporated the ownership structure of generation and more realistic measures of available supply in each market.

Furthermore, allocation methods based on historical generation would follow the degree of concentration in generation ownership in the sub-regional markets. If generation ownership in the sub-regional market is highly concentrated then market holdings of compliance instruments could be very concentrated at the outset unless U.S. EPA augments allocation with auction sales. U.S. EPA should also consider the role to be played by voluntary financial participants in offsetting market power when deciding whether allowances are introduced to the market through auction, allocation, or a combination of the two.

10. Options for providing oversight, including market monitoring activities – p. 64977

U.S. EPA requests comment on appropriate market monitoring activities, which may include tracking ownership of allowances or ERCs, oversight, and tracking of market activity. ARB strongly supports a rigorous market monitoring protocol, including third-party emissions verification, daily tracking of the market for allowances or ERCs, including holdings and trades, analysis of related energy and carbon markets, and coordination with federal market regulators including the Federal Trading Commission (FTC) and FERC. In coordination with an independent market monitor, ARB employs a rigorous market monitoring protocol including the daily monitoring of allowance transactions and related carbon and energy markets through data contained in the California tracking system (CITSS) ARB monitors progress towards compliance by evaluating covered entities’ holdings of compliance instruments relative to third-party verified emissions data collected through the Mandatory Reporting Regulation (MRR). ARB tracks volumes and prices to identify any potential market manipulation. At any time, ARB market monitoring staff can request information from market participations in relation to allowance transactions. ARB strongly encourages U.S. EPA to require a similarly-stringent market monitoring protocol for all state plans that utilize trading, as well as for the Federal Trading Plan

Federal market monitoring will be critical if the footprint of an interstate allowance trading market does not match the footprint of an existing interstate arrangement, such as a regional transmission organization or independent system operator. These arrangements will already feature a degree of co-operation in market monitoring and

reliability operations. However, these existing state-level oversight arrangements may become ineffective if the footprints of the emissions and electricity markets are not aligned.

11. Compliance periods – p. 64980

U.S. EPA has included an explanation of why it has selected a phased approach with two compliance periods of three years each and two compliance periods of two years each. ARB is providing this comment because, based on the California experience, there are additional important considerations involving three-year compliance periods beyond the ones offered by U.S. EPA.

ARB believes that U.S. EPA should perform a more extensive examination of the risks and benefits of three-year compliance periods. Based on design discussions through the Western Climate Initiative, California adopted three-year compliance periods primarily as a way of dealing with year-to-year variations in emissions, as well as year-to-year variations in rainfall and snowpack, and any potential resulting drought conditions. The longer period was viewed as a way of giving entities time to adjust to short-term shocks.

The longer compliance periods do raise the issue of potentially larger defaults than would arise from shorter compliance periods. ARB consulted with attorneys from the United States Commodity Futures Trading Commission, the California Department of Justice, U.S. EPA, and FERC, among others, on this issue. In response, ARB added a provision requiring an annual surrender of part of an entity's obligation. This provides some early warning if an entity is not keeping up with its obligations, while minimizing the loss of flexibility afforded by the three-year compliance periods.

Regardless of the potential advantages and disadvantages of schedules in the abstract, U.S. EPA should carefully consider the significant emission reductions underwritten by existing carbon markets, including California and the nine-state Regional Greenhouse Gas Initiative (RGGI), and avoid structural decisions that would make it more difficult to integrate those markets into an evolving federal structure. In particular, in ARB's view, U.S. EPA should strongly consider aligning compliance periods with existing market programs to the extent possible, and so should consider options for both the Federal Trading Plan when finalized, and for potential Clean Power Plan modifications, that would further support ready alignment with operating markets.

12. Additional approaches to ensure market liquidity – p. 64981

U.S. EPA provides a list of market features that would enhance market liquidity: allocation rules, placing allowances into the market early, public transparency of information related to allowance issuance, tracking, transfer, and holding. U.S. EPA requests comment on whether there are additional features that would enhance market liquidity. ARB supports the list of features endorsed by U.S. EPA. ARB has included these in its program and the result has been liquid spot and futures markets. ARB would suggest that an allowance set-aside, with a price-sensitive release mechanism, could further enhance liquidity by providing an upper bound to short-term price movements as well as a more assured supply. California instituted this type of approach through an allowance price containment reserve. This set-aside could also function as a reliability safety valve if U.S. EPA determines that one is necessary.

13. Need for reliability safety valve for Federal Trading Plan and allowance set-aside – p. 64981

An allowance trading market would not interfere with electricity reliability if the allowance market functions well. In California's experience, reliability has been maintained even with a more ambitious carbon reduction target than that set by the Clean Power Plan, and more ambitious renewable power integration goals. ARB provided a statement to FERC on this point during the Clean Power Plan development process.³ It continues to be ARB's view that the Clean Power Plan—especially as finalized, with a very long planning and implementation horizon—is very unlikely to result in reliability challenges necessitating a "safety valve."

Nonetheless, ARB recognizes that U.S. EPA should prudently plan based on what happens when the emissions market is disrupted. If so, careful attention is needed to the design of any potential reliability safety valve proposal. U.S. EPA states that the market options would not "restrict unit-level operational decision-making beyond requiring units to hold a sufficient number of tradeable permits." This is generally true, but dispatch disruptions could occur in certain situations. In an electricity market, with some exceptions in California (and possibly elsewhere), an entity would enter supply bids incorporating the market carbon price.⁴ The ability of an entity to bid is compromised if there is price uncertainty over its ability to purchase emissions permits

³ The statement of ARB Assistant Executive Officer Michael Gibbs to FERC's Technical Conference on Environmental Regulations and Electric Reliability, Wholesale Electric Markets, and Energy Infrastructure (February 25, 2015), is available at: <http://www.ferc.gov/CalendarFiles/20150220110141-Gibbs,%20CA%20Air%20Resources%20Board.pdf>

⁴ The primary exception in California occurs when a generator has a legacy contract that doesn't allow them to charge a carbon price to their counterparty, and their counterparty is the entity which dispatches the generator (i.e., a tolling agreement).

due to emissions market disruption. A set-aside with price-based access as discussed in section 13 could prevent this threat to reliability.

ARB is concerned that U.S. EPA's concept of a set-aside depends on a "demonstration" by a covered entity that supplies are unavailable. U.S. EPA's proposal to distribute compliance instruments to "affected" EGUs "during or after an unforeseen emergency reliability event" also may create an over reliance on administrative measures inside a market system. Administrative methods of releasing compliance instruments to the market may react too slowly and may also disrupt normal market functioning by "overshooting." Requiring a covered entity to demonstrate the need for additional instruments could prevent timely access to supplies. Structuring a set-aside to allow covered entities access to additional allowances at a known price would provide a self-evident demonstration of need. Having transparency in exactly how and when additional instruments would be available in the market is also important from a market efficiency perspective. Administrative measures may include some type of subjective process that may not be consistently applied each occurrence and may result in delays in the release of instruments to the market.

An allowance set aside designed to enhance market stability (as described above) could also provide a measure of reliability assurance. ARB agrees with U.S. EPA that a separate reliability-based reserve may not be needed.

14. Worker Certification – p. 64982

U.S. EPA has requested comment regarding whether the Federal Trading Plan should encourage EGUs to include demonstrations that work conducted to comply with the Federal Trading Plan be done by a proficient workforce, including through trainings and certification. ARB agrees that work should be performed by qualified personnel, and has included requirements in the California Greenhouse Gas Reporting Regulation (MRR) to ensure third-party verifiers have sufficient training and accreditation to conduct verifications of entities covered by the Cap-and-Trade Program. However, our programs do not require a demonstration by EGUs or other covered entities to make the same demonstration, and ARB believes that requiring such a demonstration in the Federal Trading Plan could result in overly prescriptive documentation requirements for EGUs to submit to the implementing state(s) or to U.S. EPA.

15. Consideration of facilities "remaining useful lives" – pp. 64982-64984

U.S. EPA requests comment on the consideration of facilities' "remaining useful lives." ARB agrees that facilities generally should not be required to make extensive capital investments in control technologies that could not be recouped during the remaining

useful lives of a facility where other options are available that can provide appropriate emissions reductions. Facilities that have short remaining useful lives should be able to comply with the Federal Trading Plan through the purchase or acquisition of allowances, avoiding the need to make costly investments in control technology.

16. Approach to permitting requirements for the Federal Trading Plan – p. 64984

U.S. EPA requests comment on the approach to permitting requirements for the federal plan. U.S. EPA has indicated that it is not proposing any permitting requirements independent of Title V permits, and that the federal plan's "applicable requirements," such as monitoring, reporting, recordkeeping, and holding sufficient allowances, would be "applicable requirements" that need to be included in a Title V permit. ARB agrees with U.S. EPA that no permit revision should be required for the allocation, holding, deduction, or transfer of allowances once the requirements applicable to such allocations, holdings, deductions, or transfers of allowances are already incorporated in such permit as appropriate.

This approach avoids unnecessary permitting disruptions or complexities associated with changing market behavior. It also avoids potential disruptions to market programs themselves that would occur if particular market requirements (e.g., for particular holding limits or compliance instrument types) were embedded in overly detailed Title V permit—resulting in unnecessary limits on market behavior. Title V permitting flexibility is an important adjunct to a successful market program.

17. Potential scenarios for EGUs (particularly small) could be subject to new source review (NSR) if taking steps to be in compliance with the Federal Trading Plan – p. 64985

ARB recognizes that it is possible that affected EGUs may take compliance actions that trigger NSR. However, if NSR is triggered by a source's actions to comply with the Clean Power Plan, ARB believes existing NSR program requirements will continue to be appropriate and effective in protecting public health. ARB does not believe U.S. EPA needs to develop any new approaches to NSR for the purposes of the Federal Trading Plan, and would oppose any efforts in relaxing NSR requirements.

18. Any comments on specific things U.S. EPA can do in design and implementation of the Federal Trading Plan to make efficient all rules that will apply to coal plants (mercury rule, etc). – p. 64985

U.S. EPA notes that EGUs are subject to several state and federal permitting requirements, and seeks comment on whether the Federal Trading Plan can help

support coordinated compliance with these requirements. In ARB's view, continued federal support for market-based trading programs in the Clean Power Plan may be an effective path forward. These programs will help provide a clear GHG price to affected EGUs, allowing owners and operators to consider these costs as they make compliance decisions. For instance, owners of aging coal-fired facilities which have compliance obligations under several federal rules (e.g., engineering improvements to capture mercury and particulates, plus upgrades to water treatment systems to address effluent and coal ash) may be more effectively able to allocate costs among facilities, and make sensible end-of-life replacement decisions, if the Clean Power Plan requirements can be clearly and appropriately monetized.

19. Need for administrative appeals process – p. 64986

U.S. EPA requests comment on the need for an appeals process in the Federal Trading Plan, and also whether such a process should be required for state plans. U.S. EPA makes specific reference to situations where appeals may be desired, such as with respect to allowance allocation. Although this may appear to be an attractive feature of a regulatory program, based on ARB's experience implementing California's market-based Cap-and-Trade Program, there are additional considerations U.S. EPA may wish to consider before attempting to include such an appeals process in the Federal Trading Plan and as a condition for inclusion in state plans.

First, since an entire sector (or multiple sectors, as in California's program) must meet the same compliance timelines for reporting, verification (if applicable), allowance allocation, and allowance surrender (from the same pool of allowances), timing becomes critical to ensuring an efficient trading program. If entities are able to institute an appeal at any step of this process for their specific circumstances, the timeline of the appeal process may result in delays that cause significant disruption to other entities covered by the program, as well as decreasing efficiencies of the market program itself. Second, during the design of ARB's program, the request for an administrative appeals process (or some other form of alternate dispute resolution) was expressed by various stakeholders with respect to emissions reporting and verification, allowance allocation, and compliance obligation surrender requirements. Third, an appeals process would be in addition to any judicial process entities may utilize, so long-established mechanisms for due process already exist, even absent an administrative appeals process.⁵

⁵ In ARB's response to this request during the design of the Greenhouse Gas Reporting Regulation (MRR) and the Cap-and-Trade Regulation, ARB noted in its rulemaking documents that "such additional process may actually increase the time and expense of resolving these matters, since parties could still ultimately end up back in court. With the timeline required by the cap-and-trade regulation, including an additional dispute resolution process in the MRR would give rise to delay that could have broader market impacts." California Air Resources Board, Final Statement of Reasons (Oct. 2011) at page 239, available at <http://www.arb.ca.gov/regact/2010/ghg2010/mrrfsor.pdf>.

To ensure the overall functioning of California's market, ARB determined that outside of several design elements of both the reporting program and the Cap-and-Trade Program, the program could not include appeals processes. For instance, by requiring emissions data reports to be completed and certified well in advance of any verification and allowance surrender deadlines, entities have time to ensure their emissions data is accurate and complete. Third-party verification also provides certainty in the final outcome of the emissions, and ultimately, surrender obligations. In addition, ARB included output-based allowance allocation, which allows for allocation that is based on reported and verified data, and calculated using regulation-defined equations. All of these features serve the function of ensuring transparent, due process for entities covered by the program, without inserting lengthy appeal processes that would disrupt the overall market. Based on this experience, ARB recommends against including appeals processes within the Federal Trading Plan.

20. Consistency of program with Clean Air Act authority – pp. 64987-64989

ARB agrees with U.S. EPA that it has broad authority to promulgate an appropriate Federal Trading Plan for states that do not submit satisfactory state plans, and that it may do so any time within the statutory deadlines. ARB also agrees that U.S. EPA has clear legal authority to employ market-based systems, as it has done repeatedly and successfully. ARB observes that the Supreme Court's recent approval of U.S. EPA's Cross-State Air Pollution Rule (as well as the D.C. Circuit's recent rejection of efforts to stay the Clean Power Plan itself) provides further evidence that U.S. EPA has authority to construct such programs to help solve complex, interstate, pollution problems, of the sort that EGU GHG emissions also pose. Such market programs regulate emissions directly, which is clearly in U.S. EPA's purview, while allowing market participants to take a wide range of actions to support compliance (including making decisions to employ enhanced energy efficiency).

21. Independent Verifiers for ERCs – pp. 65001-65008

Although California supports a mass-based trading program, we feel we can provide helpful comments on the Independent Verifier requirements that would be utilized in a rate-based trading program generating ERCs. California established the first GHG verifier accreditation and GHG verification program in North America when it adopted its Mandatory Greenhouse Gas Reporting Regulation in 2008. Based on the experience of designing and implementing this program, there are three key areas that should be considered in establishing requirements for GHG verification; accreditation of verifiers, limiting the potential for conflict of interest, and the verification process itself.

One other critical aspect of verification is that the regulatory agency develops a direct relationship with the verifiers/verification bodies. California views its verifiers as a partner in ensuring rigor in our program. That direct relationship allows for regulators to have insights into the actual administration and operation of the program as verifiers and regulated parties take action to comply with the rules. This relationship also reinforces the idea that the verifiers are not traditional consultants that are paid and available to the regulated entity to aid the regulated entity, but rather, the verifier is an objective reviewer in the process who is ultimately accountable to the regulatory agency. As part of this process, California has found direct auditing of verifiers by ARB staff reinforces this relationship and ensures rigor in the verification program overall. California recommends U.S. EPA have direct auditing and oversight of its verifiers by establishing an annual sampling audit plan, which includes reviewing the verification process from beginning to end.

If a state is going to establish its own accreditation program, California recommends U.S. EPA include a requirement that the state verification program demonstrate consistency with procedures and standards adopted by the International Standards Organization (ISO) on GHG verifier accreditation and GHG verification. The American National Standards Institute example cited in the Federal Plan Proposal could serve as a required standard to assess against for a state program as it relies on ISO standards. We would also support a process by which U.S. EPA may recognize an external verifier/verification body accreditation program that also includes requirements for knowledge of the Federal Plan Proposal.

In general, the Federal Plan Proposal includes the requirements for verifiers/verification bodies to have sufficient knowledge of the rate-based program, technical expertise, and knowledge of auditing, accounting, and information management practices. It has been California's experience that there can be a wide range of knowledge in each of these areas across a group of individuals. To ensure a minimum understanding for all verifiers operating in this space, we recommend an accreditation process that includes a step to ensure the individuals have basic knowledge about the program rules and verification process through a testing mechanism. We also recommend periodic testing to ensure that minimum knowledge about the program rules and verification process is retained over time. California currently re-accredits its verifiers on a three-year cycle. That cycle also allows for new verifiers to be accredited.

The Federal Plan Proposal also includes proposal related to conflict of interest (COI) that is very similar to the concepts included in the California GHG reporting and Cap-and-Trade Program. The California program establishes a list of high COI activities that cannot be mitigated, medium COI activities that may be mitigated, and low COI activities that require no mitigation. We also include a rotation requirement so long-term

relationships between verifiers and regulated entities are not formed that would undermine the objective activities of the verifier/verification body. U.S. EPA should consider similar requirements. California also recommends that prior to the beginning of any verification service, the verifier/verification body perform a self evaluation of the potential for conflict of interest and that those become part of the record keeping requirements for the regulated entity and verifier/verification body. California also must approve the relationship based on the self-assessment for COI by the verifier prior to any commencement of services. U.S. EPA should consider inclusion of such a step. If U.S. EPA chooses not to include this step, U.S. EPA could consider the submittal of the COI self-assessment to U.S. EPA. This would at least force the verifiers/verification bodies to actively assess the potential and document it.

The last area that is critical for a robust verification program is the process by which the verifiers/verification bodies review a GHG statement. After working with the verifiers over the last six years, California recommends clear rules, protocols, and guidance less minimizing subjectivity on the part of the verifiers/verification body is the best way to ensure a consistent and robust verification program. Verification works best when there are clear standards (rules) to assess against. To ensure consistency, we recommend the requirements for the ERC projects to be as uniform across the US, as possible. Clarity in the rules and process also gives the verifiers support as they try to work with regulated entities to gain access to specific documents, staff, and information to do their job. In our experience, providing this support to verifiers is critical as regulated entities transition into this new process, particularly in the early years.

In general, we support the types of documentation and information EPA proposes to be generated as part of the verification process. However, it is critical to remember that verification is risk-based auditing and not a complete rechecking of the process and values submitted to support the issuance of an instrument, such as an ERC. We suggest that the concept of risk-based auditing should be reflected in the requirements by adding provisions on risk assessment, ranking by risk, and data sampling based on high risk areas. California's Mandatory GHG Reporting Regulation has text that could be readily adapted for use in the Federal Plan Proposal. We also suggest the concept of a material misstatement be included in the verification process. As it written, it is not clear what happens if the verifier notes a conformance issue that has no bearing on the values used to determine the amount of ERCs to be issued and it is not clear if a minor error in the calculations would disqualify any issuance of ERCs for the project. In the California program, we chose a material misstatement of five percent. If a report contains an error of over five percent, the verifier issues an adverse verification statement. If the error is less than five percent and no regulatory conformance issues are noted, the verifier issues a positive verification statement. If the error is less than five percent and the verifier notes a regulatory non-conformance, the verifier issues a

qualified positive verification statement. The non-conformance may, or may not, be the foundation for any potential enforcement action. U.S. EPA could decide to only issue ERCs when the report notes a misstatement of less than five percent.

U.S. EPA specifically requested comment on whether the fees for verification should be administered through the agency. California also considered this option when designing and adopting its GHG third-party verification program and opted to leave fees for service to the discretion of the regulated entities. We did not see any additional value added to the robustness of the program by being part of the contracting process.

22. Entry and exit from Federal Trading Program mid-compliance period – p. 65011, p. 65029

California recognizes that a federal plan may need to be put in place quickly for states that do not submit satisfactory state plans, but urges U.S. EPA to consider a measured way of phasing in requirements within the plan once in place, in order to avoid market disruption. Specifically, we recommend requiring that transitions into and out of the Federal mass-based plan occur no more frequently than once per compliance period. California also recommends transitions only occur at the start of a compliance period. Research into existing environmental market-based mechanisms has shown that policy uncertainty can lead to price volatility, and result in compliance entities postponing decisions to invest in environmental technology⁶, whereas stable environmental market mechanisms can encourage environmental innovation⁷. Research has also shown that policy uncertainty can lead to shocks in market valuations of entities participating in the environmental market⁸. Policy certainty, on the other hand, allows EGUs to undertake longer-term carbon-saving investments that are likely to be more cost effective.

Providing policy certainty was one reason California chose to establish the annual emissions limits (also called annual allowance caps) for an eight-year period in advance of the start of our program. In part because of our clear upfront guidance provided to market participants, we have experienced low levels of price volatility and provided a

⁶ Neuhoff, Karsten, Kim Keats Martinez, and Misato Sato. "Allocation, incentives and distortions: the impact of EU ETS emissions allowance allocations to the electricity sector." *Climate Policy* 6.1 (2006): 73-91.

⁷ See section 5 of Ambec, Stefan, Cohen, Mark, Elgie, Steward, and Lanoie, Paul. 2011. "The Porter Hypothesis at 20" RFF DP 11-01 <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-11-01.pdf>

⁸ Lade, Gabriel E., C-Y. Cynthia Lin, and Aaron Smith. Policy Shocks and Market-Based Regulations: Evidence from the Renewable Fuel Standard. Working Paper, 2015 http://www.econ.iastate.edu/sites/default/files/lade_policy_shocks.pdf

stable environment for compliance entities to undertake long-term carbon reduction investments⁹.

States entering or exiting a federal mass-based plan mid-compliance period would cause shifts in the available supply of federal allowances. This would cause significant policy uncertainty for the EGU market participants. Importantly, this policy uncertainty would not only occur for the EGUs in a state making an entry or exit decision, but would also result in uncertainty for all EGUs in other states that were currently in the federal plan. All EGUs would be forced to re-evaluate anticipated prices of allowances based on the updated supply and demand for allowances within the federal mass-based program.

To minimize policy uncertainty, potential price volatility, and encourage long-term carbon reduction investments, entrance or exit would ideally occur two compliance phases after the state's decision to enter or exit. If this is not feasible, opting into or out of the federal mass-based program should occur as early as possible before a future compliance period.

An important threshold for determining the ability to enter or exit the program for future compliance periods would be that the final federal mass-based program mass-based allowance caps had not been set and allowance allocation decisions had not yet been made for that compliance period. Allowing entry or exit after this point could cause a rush of entry or exit as states viewed entry or exit as more or less advantageous to their EGUs. This could result in many quick re-evaluations of the attractiveness of the federal mass-based program immediately before the start of a new compliance period, as more entry or exit decisions were made based on the updated allocation proposal. The subsequent uncertainty and potential price volatility outweighs potential benefits of allowing mid-period entry and exit decisions.

23. Statewide mass-based goals – p. 65012

As ARB noted earlier in these comments, U.S. EPA should consider including mechanisms to adjust the statewide mass-based goals on the basis of changes in the population of affected EGUs. For instance, in California, ARB has obtained information from stakeholders that may lead it to suggest a different list of affected EGUs than that originally identified in the Clean Power Plan, for U.S. EPA review. Because plant-

⁹ From 2013 to present, California's allowance prices have ranged from a minimum of \$10.09 to a maximum of \$14 per ton CO₂e. In percentage terms, this is a fluctuation of less than forty percent. Excluding initial price discovery in the first year of the program lowers this variation further. In the past two years, prices have ranged from a minimum of \$11.48 to \$12.73 per ton CO₂e. This is a fluctuation of less than eleven percent.

specific information of this sort may continue to need adjustment, U.S. EPA may need to conduct a further review of which EGU should be declared affected EGU before finalizing the rule.

24. Compliance timing and allowance banking – p. 65013

Also as noted above, ARB believes U.S. EPA should seriously consider aligning compliance timing with those in the ARB and RGGI systems (including, potentially, their partial surrender requirements), rather than imposing different compliance periods in the Federal Trading Plan. Potential future linkages between different market systems will be easier to develop if the systems function on the same time tables, or at least have clear translation methods between different timing systems. U.S. EPA should work to support the development of linked systems, and to avoid unnecessary disruptions to existing systems.

U.S. EPA also asks for comment on the utility of allowance “borrowing” from future compliance period. While California’s rule does not allow for explicit borrowing of future vintages for current compliance, it does contain a number of provisions that allow for implicit borrowing. These provisions generally provide operational flexibility, such as in allocation true-ups, or provide cost containment against shocks, such as in creating the Allowance Price Containment Reserve using future vintage allowances. ARB allowed these instances of implicit borrowing because they should not result in the phenomenon of “cascading borrowing,” in which borrowing lowers current prices and reduces incentives for direct reductions. Generally, ARB suggests U.S. EPA favor flexible compliance period and borrowing designs to the extent possible—although accounting for these systems may be somewhat more complex, retaining the option (with appropriate compliance demonstrations) may be important in some circumstances.

25. Factors and considerations on allocation method – p. 65015

We are commenting specifically on the mass-based Federal Trading Plan. We see two distinct topics within U.S. EPA’s concept of allocation. The first is the setting of the size of the mass-based target, and the second is how to allocate permits to existing EGUs within the context of the Federal Trading Plan. We believe both should be influenced by future developments between now and the implementation of the Clean Power Plan. In this section of our comments, we discuss the setting of the mass-based target.

The intended stringency of the mass-based target based on 2010, 2011, and 2012 data may be quite different from the true stringency of the program once it is implemented in the market conditions of 2022 through 2030. We strongly recommend a pre-established mechanism be in place to avoid an unintentionally lax cap, and outline one possible mechanism here. A lax cap would result in minimal carbon reductions beyond the status

quo, not in keeping with the intent of the Clean Power Plan. We recommend, therefore, that the final mass-based targets be re-visited and, if necessary, revised for future compliance periods using 2019 and 2020 (or another reasonable period closer to the start of the program in 2022) Federal Greenhouse Gas Reporting Program data. The federal Clean Air Act provides for reviews and revision of section 111 programs at least every eight years. U.S. EPA could use these review processes, in collaboration with the states, to continue to adjust the stringency of the Clean Power Plan and Federal Trading Plan over time, as power sector trends continue to reduce the carbon intensity of the sector.

There are many reasons mass-based targets set using 2010-2012 data may be significantly different from targets that would be set using 2019-2020 data. One is the significant likelihood that the grid will be increasingly decarbonized with the increasing affordability of, and state-level policy mandates for, renewable electricity. Additional reasons include changes in electricity demand, uncertainty in the level of new source construction, and potential pre-2022 EGU retirement. These and other as-of-yet unforeseen changes in U.S. electricity markets could lead to the existing mass-based targets matching or even exceeding 2022-2030 status-quo emissions by a significant margin. In turn, this would lead to the Clean Power Plan having a limited impact on carbon reductions.

An existing carbon regulation, the European Union Emissions Trading System (EU ETS), already experienced permit oversupply based on an unintendedly loose carbon cap set prior to program implementation. The EU ETS unintentionally over-allocated permits in advance of its first compliance phase. Subsequent analysis has indicated this stemmed in part from the combination of uncertainty of true historical country-level emissions, and a shock of lower-than-anticipated demand for permits. After it became clear part-way through the first compliance phase that permit supply outstripped demand, permit prices collapsed. Due to continued oversupply, EU ETS permit prices have remained extremely low. This has led to a reduced incentive for European regulated entities to undertake actions reducing emissions.

In summary, the Clean Power Plan's dual stated objectives are to "help protect human health and the environment from the impact of climate change" and "to establish the foundation for longer term GHG emissions reduction strategies necessary to address climate change¹⁰." To meet these objectives, California recommends revisiting planned mass-based targets based on at least 2019-2020 emissions and output data, and updating state targets on a rolling basis for later compliance periods. Doing so would help avoid a potential price collapse of allowances in the Federal Trading Plan, and

¹⁰ 80 Fed. Reg. p64663 Section I.A.1. (Dec, 19th, 2015),

ensure the Clean Power Plan delivers meaningful carbon reduction beyond the status quo of 2022-2030 emissions.

26. Historical allocation approach, other allocation approaches, initial distribution approaches, leakage through allowance set asides, set-asides for output-based allocation, set asides for RE – p. 64978, pp. 65016-65022

Studies by M.J. Bradley & Associates LLC¹¹ and Resources for the Future¹² have concluded that the five percent natural gas combined cycle (NGCC) set-aside may insufficiently prevent leakage. In this section, we discuss improving the wealth transfer implicit in U.S. EPA's proposed allowance distribution methodology, means by which to prevent over-allocation, and options to strengthen leakage prevention.

The demand for a limited supply of allowances within a mass-based program causes allowances to have financial value. The initial distribution, or allocation, of these valuable allowances to EGUs or other market participants is a significant wealth transfer. This wealth transfer can be chosen in a way to intentionally meet different objectives. Possible objectives include leakage prevention, incentivizing efficient EGU electric production, and generating revenue. Revenue generation can be attractive as it can be distributed to ratepayers, used to fund zero-carbon energy sources, or directed towards carbon-reducing research and development.

U.S. EPA's proposed plan would freely distribute all of these valuable allowances, and thus transfer significant wealth, to all EGUs based on historical generation. California believes there are allocation approaches that are better than free historically driven allocation. In the electric sector of California's mass-based program, we allocate a portion of our program's allowances to load-serving entities (LSE) for free, and have required that most LSEs (specifically, investor-owned utilities) consign the allowances to auction. The allowances proceeds must be used for ratepayer benefit and consistent with our state's emissions reduction legislation. Any allowances not allocated to specific entities are auctioned by the state and the auction proceeds are used to fund GHG emissions reductions. An allocation approach similar to California's could alleviate the impact of federal mass-based program on ratepayers while minimizing potential increases in non-covered emissions that could undermine the carbon savings of

¹¹ M.J. Bradley & Associates LLC. 2016. "EPA's Clean Power Plan, Summary of IPM Modeling Results" http://mjbradley.com/sites/default/files/MJBA_CPP_IPM_Analysis.pdf

¹² Burtraw, Dallas, Karen Palmer, Anthony Paul, and Hang Yin. 2016. "Approaches to Address Potential CO2 Emissions Leakage to New Sources under the Clean Power Plan." Technical background for public comments to EPA. Washington, DC: Resources for the Future http://www.rff.org/files/RFF-CPP_Technical-Background.pdf

covered EGUs. We recommend that a federal mass-based plan under 111(d) should combine two allowance allocation strategies.

First, we recommend that allowances be awarded to new, voluntary entrants into the federal mass-based program for the purpose of leakage prevention. These allowances would be distributed using a benchmark emissions factor. In accepting allowances from this pool, voluntary entrants would agree to be regulated under the federal mass-based program. The aggregate federal mass-based target would remain unchanged by the voluntary entry of additional facilities. To be attractive to future voluntary entrants, this benchmark factor would need to be above that of their expected carbon emissions rate. An initial benchmark factor could be the emissions of the lowest decile of existing NGCC units in operation during the 2019 and 2020 proposed initial carbon baseline period. This would represent an improvement over the current new-source emissions benchmark that would be feasible given then-current technology. U.S. EPA's proposed new-source benchmark under the Clean Power Plan is higher than that of many NGCC in operation today. As future technology allows for greater GHG efficiency—and voluntary entry is significantly adopted or not—this benchmark allowance factor for voluntary entrants could be periodically updated over time (e.g., once before every compliance period). The allowance award to each voluntary entrant would be renewed each year, but subject to a set decline factor. The decline would be slow enough to offer an appealing incentive to join the mass-based program upon first entry for entrants with low emissions factors, but high enough to prevent long-term program-wide over-allocation. Voluntary entry would not be restricted to certain technologies, but would be open to fossil and non-fossil generators.

Second, we recommend that the remainder of allowances in the federal mass-based program be allocated to LSEs and that U.S. EPA require them to consign them to auction. U.S. EPA would coordinate and oversee these auctions, but would not own the auction proceeds. The specific allowance allocation to each LSE could be decided at the state level, or at the federal level if states opt not to. The portion of the auction proceeds raised by the sale of a specific LSE's allowances could then be distributed by the LSEs according to federal plan requirements.

Potential uses of this revenue include development of low- or zero-carbon electricity sources whose generation is covered under the mass-based program, reducing greenhouse gas emissions in environmental justice communities, energy efficiency measures, and to a lesser extent, auction proceeds return to customers in a manner that does not reduce the incentive to decrease electricity consumption. Distributional and equity concerns might lead to a potential means-testing of the rate assistance. A non-volumetric¹³ distribution of proceeds preserves a price signal for electricity

¹³ "Volumetric means a constant dollar amount per amount of energy (i.e., dollars per kilowatt-hour).

customers to reduce carbon emissions, while they are still compensated by the reduction in the cost of the utility bill via the return of proceeds. Proceeds awarded to zero-carbon electricity could be open to any project developer, and allocated only to zero-carbon electricity not used to satisfy existing state renewable portfolio standards.

If awarding allowances to voluntary entrants is not a preferred approach, we still recommend auctioning on behalf of LSEs, but then recommend that remaining allowances be exclusively allocated to NGCC units according to an appropriate output-based updating benchmark factor. California strongly recommends against allocating allowances to non-NGCC EGUs. Allocating output-based updated allowances to non-NGCC units provides an incentive for higher-emitting electricity sources to increase output. Research has also shown that allocating to all generators may have the unintended consequence of increasing allowance prices; i.e., the price of allowances must reach a higher level to motivate carbon reductions when highly-carbon-intensive generation is also implicitly subsidized by future allowances¹⁴. The NGCC output-based updated allocation would need to be larger than the five percent reserve envisioned by U.S. EPA to meaningfully motivate increased production from all NGCC units.

We recommend that output-based updating implementation start at the beginning of the first compliance period. Early implementation would provide immediate assistance to NGCC EGUs in achieving high capacity factors. Similarly, distribution of output-based allocated NGCC allowances on an annual basis based on the prior year of output would help provide more tangible assistance than waiting until the next compliance period. The initial carbon reporting in 2019 and 2020 could set the first output-based updating allowance allocation. This may cause NGCC operators to dispatch differently in 2019 and 2020 than they otherwise would have in the absence of anticipation of output-based updated 2022 credits, but we believe this effect would be limited. A benchmark factor could be that of the average NGCC EGU in 2019 and 2020, but could be revisited based on the potential for increased (decreased) leakage risk based on high (low) past allowance prices.

27. Auction design and considerations – p. 65018

California has found uniform-price sealed auctions to be a transparent and straightforward approach to auctioning allowances. California would recommend this approach both for these allowance auctions and also for any potential price containment reserve allowances. We have found regularly-scheduled quarterly auctions provide

¹⁴ Bushnell, James, and Yihsu Chen. "Allocation and leakage in regional cap-and-trade markets for CO₂." *Resource and Energy Economics* 34.4 (2012): 647-668.

frequent price-discovery among compliance entities, as opposed to annual or once-per-compliance-phase allocations.

California offers two types of allowances in the quarterly auctions. First, California allocates the quarterly share of each compliance phase's "spot" current-vintage allowances not already distributed by another method. Second, we offer some "advance" allowances from future compliance vintages. We find that offering "advance" allowances helps compliance entities with price discovery and longer-term financial planning. In a federal mass-based program, the analogue would be for a portion of each LSE's current compliance period allowances and a smaller portion of future compliance period allowances to be auctioned in each quarter. See our comments on U.S. EPA's proposed historical allocation approach that include our recommendation of an alternate allocation method with a substantial use of LSE auctioning.

The Federal Trading Plan should include a price floor on allowance prices in conjunction with allowance banking. Allowance banking is a useful component of mass-based programs and can help minimize differences in allowance prices between compliance periods. In the case of excess allowances in early periods, however, a demand-supply imbalance of permits can lead to a collapse in allowance prices, as happened with the European Union Emissions Trading System (EU ETS). A collapse with no price floor would lead to low allowance price levels. In turn, low allowance price levels would result in a limited incentive for EGUs to undertake carbon-reducing activities and investments. A price floor prevents this potential collapse.

A price floor is simple to implement with California's recommendation of auctioning a portion of each compliance period's allowances. U.S. EPA, as the administrator of the federal mass-based program, can specify a minimum price at which allowances are available for sale on the LSE's behalf during the auction. If there is insufficient demand for allowances at the minimum price to purchase all of the LSE allowances available during an auction, the remaining allowances would be returned back to the LSE to be auctioned at a later date. A minimum price can be projected into the future using a transparent calculation.

The joint California-Québec market, for instance, set a minimum price at which permits would be sold in 2013. The California-Québec market increased this price by a 5% minimum annual escalation combined with an escalation factor equal to the Consumer Price Index (CPI). This formula for allowance price is as follows:

$$\text{Next Year's Price} = \text{Current Year's Price} * (1 + 5\% + \text{CPI} \%)$$

U.S. EPA requests comment on the use of an allowance tracking system. ARB agrees that a mass-based trading program should use an allowance tracking and compliance system and that the tracking system should be designed to support future linkage. As previously described, California utilizes the Compliance Instrument Tracking System Service (CITSS) to facilitate the registration of entities and their designated representatives, ensure accurate tracking of allowances issued and utilized in the system, include emissions data per covered entity, as well as track any trades of allowances as they occur. CITSS has been designed to ensure that the linked, economy-wide programs of California, Québec, and potentially other partners are operating with sufficient alignment to ensure effective tracking, market monitoring, and to allow entities to comply with their Cap-and-Trade obligations. ARB supports U.S. EPA seeking to require the use of a tracking system(s) that achieve these same goals.

29. Emissions monitoring and reporting requirements – p. 65031

U.S. EPA requests comment on the use of Continuous Emissions Monitoring System (CEMS) for emissions monitoring and reporting. Given their accuracy and existing use, ARB agrees that it is reasonable to use CEMS. California does recommend that U.S. EPA consider if the missing data provisions for CEMS reporting are sufficient to ensure a conservative accounting approach and provides a strong incentive for regulated entities to inspect and calibrate their CEMS units as required.

30. Process for submittal and approval of state plans and U.S. EPA actions – p. 65034

Distinct from the Federal Trading Plan, U.S. EPA has also approved a suite of state plan processing changes that would enhance the flexibility and precision of the plan review process. ARB very strongly supports these proposed amendments. As U.S. EPA observes, these flexibility mechanisms—including parallel processing of plan approvals, conditional approvals, and partial approvals—allow U.S. EPA to more fully consider state plans, and to avoid disapproving plans that are largely consistent with federal requirements. These tools support the federal/state partnership, and are consistent with section 111(d)'s recognition that U.S. EPA's proceedings under that section should be "similar" to those under section 110, where all of these processing tools are already available. U.S. EPA should finalize these changes as proposed.

31. Separate finalization of changes – p. 65039

Because the state plan processing tools are distinct from the remainder of the proposal, they may be finalized separately. ARB strongly supports swift finalization of these

changes. Many states may need these tools to begin the plan submission process, since they will allow states to work with U.S. EPA towards fully approved plans over the next few years. Indeed, ARB anticipates that finalization of these tools would make it much more likely that California will be able to submit a plan for approval on an accelerated timetable. Finalization of these changes by mid-2016—before the initial submission deadline in September 2016—is important to provide clarity to California, and other states developing state plans as we consider our rulemaking calendars.

32. Conclusion

Thank you for considering these comments. ARB looks forward to continuing to work with U.S. EPA as the Clean Power Plan continues to be developed and the state planning process moves forward.

Sincerely,

/s/ Edith Chang

Edith. Chang
Deputy Executive Officer
California Air Resources Board